DOCUMENT RESUME

ED 082 275   EA 005 144

AUTHOR   Barraclough, Terry
TITLE   Program Evaluation. Educational Management Review
                    Series Number 21.
INSTITUTION   Oregon Univ., Eugene. ERIC Clearinghouse on
                    Educational Management.
SPONS AGENCY   National Inst. of Education (DHEW), Washington,
                    D.C.
PUB DATE   Sep 73
CONTRACT   OEC-0-8-080353-3514
NOTE   8p.

EDRS PRICE   MF-$0.65 HC-$3.29
DESCRIPTORS   Bibliographies; Curriculum Evaluation; *Educational
                    Administration; Educational Objectives; Evaluation;
                    Evaluation Criteria; *Evaluation Methods; *Evaluation
                    Techniques; *Literature Reviews; Models; Program
                    Administration; *Program Evaluation; Program
                    Improvement

ABSTRACT

           Program evaluation enables administrators to
determine the merits of existing programs and the need for new ones.
It can lead to revision, deletion, or inception of educational
programs. This review examines general information on program
evaluation, including evaluation design, methodology, and
bibliographic materials. Eleven of the documents reviewed are
available from the ERIC Document Reproduction Service. A
supplementary bibliography lists documents on program evaluation
within specific program areas. (Author)

September 1973

Number 21

ED 082275

Program Evaluation

Terry Barraclough

> Effective school program evaluation is a dynamic, vital foun-
> dation for instructional improvement. Educators undertaking a
> school evaluation are taking inventory of all phases of the school
> program. From the evaluation, changes in practice can be insti-
> tuted or continuation of existing practices can go on with some
> assurance that a school program of acceptable quality exists. . . .
> Evaluation does not imply that something defective exists.
> Quite the opposite. Evaluation is a form of insurance that good
> practice will be nurtured and continued. School evaluation
> makes good schools even better.
>
> *"Evaluation Guide . . ."(1969)*

Program evaluation enables administrators to watch over the
educational process. Evaluation can determine the merits of
existing programs and the need for new ones. It can lead to
revision, deletion, or inception of educational programs.

The importance of program evaluation to the process of
education has engendered a large body of research and specu-
lation. The documents in this review concentrate, for the
most part, on methods of program evaluation. A few docu-
ments of importance concerning general information and
evaluation design are included, as are several bibliographic
works. A supplementary bibliography lists documents on
program evaluation within specific program areas.

Eleven of the documents reviewed are available from the
ERIC Document Reproduction Service. Complete ordering
instructions follow the review.

GENERAL INFORMATION

A guide by the University of Kentucky (1964) maintains that conscientious evaluation, including self-evaluation by educators, is essential to program improvement. The guide focuses on program goals and objectives, staff, administration, finance, school plants, and transportation as they relate to evaluation.

The Kentucky study identifies a problem in evaluation design. Some aspects of the program are difficult or impossible to measure. The only alternative to direct measurement is inference:

> We simply assume—without a very sound reason for doing so, except that we have no other alternative—that what is measurable (including much we honestly cannot measure very accurately) is correlated with some important things we do not know how to measure.

Curriculum evaluation involves collecting, processing, and interpreting both objective and subjective data (Stake 1967). The objective data include descriptions of goals, environments, personnel, methods, content, and outcomes. Subjective data are personal judgments by the evaluator.

Stake cites the need for new techniques of observation and judgment with greater attention to diagnostic testing, task analysis, and goal evaluation. He believes that behavioral science techniques should be utilized in curriculum evaluation.

EVALUATION DESIGN

Nivette (1969) cites three requirements of educational objectives. First, objectives should describe what the student does. Second, they should describe conditions under which the student's performance can be observed. Third, objectives should describe the standards the student must meet.

> ... communication and interaction with key decision-makers is a cornerstone on which effective evaluation rests.
>
> *Randall (1969)*

The definition of educational objectives in behavioral terms is the first step in Nivette's evaluation design. The objectives must then be translated into descriptions of behavior, and the evaluator must identify situations in which the designated behavior can be observed. An interpretive device to measure desired growth is the next requirement of an evaluation design. Finally, the evaluator must state his conclusions regarding the extent to which the objectives are achieved.

Nivette also includes in his study alternative methods for designing evaluation procedures, five evaluative designs, and a discussion of the use of statistics in evaluation design.

A booklet by the Educational Innovators Press (1970) defines performance and process objectives and provides a set of procedures for developing and writing each. Both types of objectives contribute to the integration of accountability into evaluation of an educational program.

Unless both norm- and criterion-referenced measures are used, realistic evaluations cannot be made (Klein 1972). Norm-referenced measures compare performance to a norm or average, criterion-referenced measures to a predetermined criterion. Klein regards the essential difference between the two types of measures as a question of interpretation, not measurement. He cites the need for both norm- and criterion-referenced interpretation in identifying program components needing improvement and students needing special attention,

in providing the basis for accountability systems, and in determining whether a program is being implemented as planned.

An evaluation guide in *The North Central Association Quarterly* ("Evaluation Guide . . ." 1969) characterizes evaluation as a foundation for educational change. The authors describe preparation, evaluation, and follow-up procedures used by members of the association and note the ongoing nature of evaluation:

> Evaluation is a continuous process. As each decision is made in the school about students, teachers, content, or services offered, some evaluation is made concerning past performance and future need.

Three types of evaluation criteria are identified in the guide. Predictive criteria are quantitative measures such as teacher preparation details, number of volumes in the library, and length of class period or school day. Product criteria are behavioral changes in pupils. Process criteria involve occurrences during the teaching process or elsewhere in the school experience.

EVALUATION MODELS

According to Borg (1971), three evaluation models can be used to assess educational products and processes. In the *unvalidated form of experience* model, the evaluator hypothesizes that certain specific pupil behaviors will create changes in other pupil behavior. He then develops a product or process designed to cause the behaviors, collects observational data, and makes an inferential leap to conclude success or failure of the product or process.

The *validated form of experience* model adds related research evidence to the hypothesis but is otherwise identical to the first model. The *direct performance evaluation* model compares the performance of children exposed to the product or process to the performance of a control group. The nature of the problem, available funds, constraints such as time, and the consequences of mistakes in judgment will determine the particular evaluation model best suited to a program.

The EPIC Evaluation Center (n.d.) defines objective evaluation of school programs as a process in which a school staff collects information to determine whether a given set of objectives has been met. The Evaluative Programs for Innovative Curriculums (EPIC) scheme distinguishes and defines three types of variables: instructional, institutional, and behavioral.

The first step in the EPIC evaluation plan involves identification of variables, composition of behavioral objectives, and development of the evaluative design. The second step is program description and data gathering. Data analysis follows. The final step is the decision-making recycling process. To illustrate its application, the entire EPIC procedure is applied to a specific program.

A paper by Hartwig (1971) presents a deliberately simplified evaluation model. The five steps involved are identification of need, statement of desired outcomes, development of a program, ongoing evaluation, and terminal evaluation.

Randall (1969) describes the Stufflebeam-Guba context, input, process, and product (CIPP) model for evaluation of educational innovations. He sees evaluation as a combination of effective decisions based on timely, relevant information. Problems in evaluation include identifying decisions and decision-makers, timing decisions, identifying relevant information, and reporting information in a useful form.

Randall identifies four classes of evaluation:

Context evaluation deals with the setting of priorities and the selection of strategies.

Design evaluation entails specification of objectives and selection of the means to attain those objectives.

Process evaluation assesses the possible need to restructure the program after the results of pilot testing and previous evaluations are in.

Product evaluation determines the effectiveness of the program in attaining its overall goals.

Roth (1971) maintains that information obtained from program evaluations is usually subjective, vague, imprecise, and outdated. His five-step *program monitoring system* stresses immediacy of feedback and constant monitoring. The first step is statement of goals in specific, measurable terms. Next is the determination of valid behavioral characteristics indicative of goal achievement. Third, data are obtained at established intervals and, fourth, collected and organized at a central source. Finally, the program directors must review results regularly.

The Independent Accomplishment Audit (IAA) measures student performance as a result of financial outlays (Lessinger 1970). The *pre-audit* stage includes determination of objectives and establishment of priorities. *Translation* involves the clear formulation of acceptable evidence. In the *instrumentation* phase, instruments are determined and techniques established. The *review calendar* determines timing. The auditor then carries out the *audit* and makes the results part of the *public record*.

Fogel (1971), applies the techniques of systems analysis to program evaluation. The evaluator should determine the stated program goal and measure approximation to that goal. Then he must identify elements of the program that might reduce the discrepancy between the stated goal and actual achievement. Elements outside the program can also have an effect on goal achievement, and these elements should be isolated. Individual processes and their goals must be identified and analyzed and any additional variables determined. From this systems analysis, the evaluator should gain a fairly complete understanding of the program and a good idea of the weaknesses warranting further study.

A handbook by Glassner (1969) provides an orientation to the *discrepancy evaluation model*. This model posits that the continuous reporting of observed differences between the program staff's expectations for a program and field reality will lead decision-makers to effect desirable changes.

The first stage of the discrepancy evaluation model stresses coordination of the evaluator and the program staff in planning, generating, and amending the program evaluation design. The second stage compares the design to actual operation of the evaluation.

Rippey (1972) argues for cooperation of both protagonists and antagonists of change on a change-oriented team. His transactional evaluation model concentrates on the effects of change on those bringing about the change.

BIBLIOGRAPHIC MATERIALS

Eidell and Klebe (1968) compiled an annotated bibliography of sixty-four documents on program evaluation. The documents emphasize methods, procedures, and

models, and deal specifically with the evaluation of subject programs, state and federal programs, curriculum planning, and innovation. Some entries treat the development and use of mathematical models and cost-benefit analysis.

A bibliography compiled by Kidder (1971) includes twenty-eight abstracts of documents on program evaluation. The entries focus on evaluation methods and on the contributions of programs to student development.

REFERENCES

Abstracts of the following documents can be located in *Research in Education*. The complete texts are available from the ERIC Document Reproduction Service (EDRS), commercial channels, or both. Publications can be ordered in either Xerox copy form (HC) or microfiche (MF).

For each order, indicate the ED numbers of the desired publications, the type of reproduction desired (paper or microfiche), and the number of copies being ordered.

Payment must accompany orders under $10.00. Postage, at book rate or library rate, is included in the price of the document. If first class mailing is desired or if shipment is outside the continental United States, the difference between book rate or library rate and first class or foreign postage will be billed at cost. All orders must be in writing.

Journal articles cited with EJ numbers are indexed in *Current Index to Journals in Education*, a monthly companion index to *Research in Education*. Reproductions of the journal articles are not available from EDRS.

Address requests to ERIC Document Reproduction Service, P.O. Drawer O, Bethesda, Maryland 20014.

Borg, Walter R. *Three Levels of Evaluation for Educational Products.* 1971. 10 pages. ED 054 229 MF $0.65 HC $3.29.

Educational Innovators Press. *Performance and Process Objectives.* Tucson, Arizona: 1970. 30

pages. ED 054 606 Document not available from EDRS. (Available from Educational Innovators Press, Box 13052, Tucson, Arizona 85711. $2.25.)

Eidell, Terry L., and Klebe, John A., compilers. *Annotated Bibliography on the Evaluation of Educational Programs.* Eugene: ERIC Clearinghouse on Educational Administration, University of Oregon, 1968. 19 pages. ED 025 857 MF $0.65 HC $3.29.

EPIC Evaluation Center. *A Structure and Scheme for the Evaluation of Innovative Programs. The EPIC Brief, Issue No. 2.* n.d. 19 pages. ED 028 103 MF $0.65 HC $3.29.

"Evaluation Guide for Secondary Schools. Second Printing." *North Central Association Quarterly*, 43, 3 (Winter 1969), pp. 295-315. EJ 000 687.

Fogel, Richard Louis. "An Approach for Program Evaluation." *Educational Technology*, 11, 11 (November 1971), pp. 39-42. EJ 047 200.

Glassner, Leonard E. *Handbook for Evaluators.* Pennsylvania: Office of Research, Pittsburgh Public Schools, 1969. 62 pages. ED 035 980 MF $0.65 HC $3.29.

Hartwig, Keith E. *A Basic Model for Planning, Monitoring, and Evaluating Educational Programs.* 1971. 4 pages. ED 053 196 MF $0.65 HC $3.29.

Kidder, Mary Jane, compiler. *Searchlight: Relevant Resources in High Interest Areas. Program Evaluation and Accountability. 7R·Retrospective Search.* Ann Arbor, Michigan: ERIC Clearinghouse on Counseling and Personnel Services, 1971. 18 pages. ED 061 569 MF $0.65 HC $3.29. (Also available from ERIC/CAPS, Room 2180, School of Education Building, University of Michigan, Ann Arbor, Michigan 48104. $1.00.)

To gather the documents used in this review, *Research in Education* monthly catalogs were searched from January 1968 through April 1973 and *Current Index to Journals in Education* monthly catalogs from January 1969 through April 1973, using as search terms these descriptors: **Evaluation Criteria, Evaluation Methods, Evaluation Techniques, and Program Evaluation.**

Klein, Stephen P. "Ongoing Evaluation of Educational Programs." Paper presented at American Psychological Association convention, Honolulu, Hawaii, September 1972. 12 pages. ED 069 725 MF $0.65 HC $3.29.

Lessinger, Leon M. "How Educational Audits Measure Performance." *Nation's Schools*, 85, 6 (June 1970), pp. 33-34. EJ 022 859.

Nivette, James D. *A Rationale and Methodology for Designing Logical Evaluations for School Programs. Research Study Series, 1967-68*. California: Los Angeles County Superintendent of Schools, 1969. 23 pages. ED 036 830 MF $0.65 HC $3.29.

Randall, Robert S. "An Operational Application of the Stufflebeam-Guba CIPP Model for Evaluation." Paper presented at American Educational Research Association annual meeting, Los Angeles, February 1969. 9 pages. ED 027 633 MF $0.65 HC $3.29.

Rippey, Robert. "Introduction: What Is Transactional Evaluation?" Paper presented at American Educational Research Association annual meeting, Chicago, April 1972. 6 pages. ED 060 071 MF $0.65 HC $3.29.

Roth, Theodore C. "How to Get the Data You Need to Make Intelligent Decisions." *American School Board Journal*, 158, 12 (June 1971), pp. 18-19. EJ 039 684.

Stake, Robert E. "Toward a Technology for the Evaluation of Educational Programs." In *Perspectives of Curriculum Evaluation, AERA Monograph Series on Curriculum Evaluation*, edited by Ralph W. Tyler and others. Chicago: Rand McNally and Company, 1967. 17 pages. ED 030 948 MF $0.65 HC $3.29. (Also available from Rand McNally and Company, Box 7600, Chicago, Illinois 60680. Complete document, 102 pages, $3.50.)

University of Kentucky. *The Measure of a Good School. A Guide to Evaluation of School Systems Adapted Particularly for Use in Kentucky School Districts*. Lexington: College of Education, 1964. 78 pages. ED 037 920 MF $0.65 HC not available from EDRS.

SUPPLEMENTARY BIBLIOGRAPHY

Business Education Programs

Wyllie, Eugene Donald. *An Evaluation Plan for Business Education Programs in High Schools.* *South-Western Monographs in Business and Economic Education, Number 109*. 1963. 40 pages. ED 016 851. MF $0.65 HC $3.29.

Computer Assisted Instruction

Mitzel, Harold E. *How to Evaluate Computer Assisted Instruction*. University Park: Pennsylvania State University, 1970. 6 pages. ED 047 005 MF $0.65 HC $3.29.

Driver Training Programs

Harman, Harry H., and others. *Evaluation of Driver Education and Training Programs*. Princeton, New Jersey: Educational Testing Service, 1969. 70 pages. ED 041 106. Document not available from EDRS. (Available from National Technical Information Service, Springfield, Virginia 22151. PB 183 805 MF $0.95 HC $6.00.)

English Programs

Jacobs, Paul H. "Criteria for Evaluating High School English Programs." *English Journal*, 57, 9 (December 1968), pp. 1275-1296. ED 029 024 Document not available from EDRS.

Foreign Language Programs

Jay, Charles D., and Castle, Pat. *Guidelines for Evaluating Foreign Language Programs*. Springfield: Illinois State Office of the Superintendent of Public Instruction, n.d. 13 pages. ED 013 592 MF $0.65 HC $3.29.

Guidance Programs

Andersen, Dale G., and others. *Guidance Evaluation Guidelines. Guidelines for Evaluation of Counseling and Guidance Programs*. Olympia: Washington State Board of Education, 1967. 37 pages. ED 049 480 MF $0.65 HC $3.29.

Home Economics Programs

Nelson, Helen Y., and Jacoby, Gertrude P. *Evaluation of Secondary School Programs to Prepare Students for Wage Earning in Occupations Related to Home Economics. Final Report, Vol. II, Appendix*. Ithaca: New York State College of Home Economics, 1967. 184 pages. ED 022 030 MF $0.65 HC $6.58.

Individualized Instruction

Lindvall, C. M., and Cox, Richard C. *A Rationale and Plan for the Evaluation of the Individu*

ally Prescribed Instruction Project. Philadelphia: Research for Better Schools, Inc., [1969]. 8 pages. ED 036 179 MF $0.65 HC $3.29.

Innovative Programs

American Association of School Administrators. *ERIC Abstracts: A Collection of ERIC Document Resumes on Assessing Educational Innovations. ERIC Abstracts Series, Number Twenty-three.* Washington, D.C.: National Academy for School Executives, 1972. 21 pages. ED 070 177 MF $0.65 HC $3.29. (Also available from National Academy for School Executives, 1801 North Moore Street, Arlington, Virginia 22209. $2.00, quantity discounts.)

Instructional Television and Films

Carpenter, C. R., and Froke, Marlowe. *Description of a Practical Procedure for Assessing Instructional Film and Television Programs.* University Park: Department of Psychology, Pennsylvania State University, 1968. 43 pages. ED 037 102 MF $0.65 HC $3.29.

Mathematics Programs

Kilpatrick, Jeremy. "Evaluating a Unified Mathematics Curriculum." From American Educational Research Association symposium, Minneapolis, March 1970. 4 pages. ED 042 811 MF $0.65 HC $3.29.

Modular Scheduling

Maxey, James. "Evaluation of the Outcomes of Modular Scheduling." Paper prepared for meeting of Iowa Center for Research in School Administration, 1968. Iowa City: Iowa Center for Research in School Administration, University of Iowa. 10 pages. ED 026 733 MF $0.65 HC $3.29.

Music Programs

Aebischer, Delmer W. *Self-Evaluation Checklist for School Music Programs. (Grades 1-6 and Administrator's Form.)* Salem: Oregon State Board of Education, 1971. 27 pages. ED 069 582 MF $0.65 HC $3.29.

National Educational Programs

Jaeger, Richard M. "Evaluation of National Educational Programs: The Goals and the Instruments." Paper presented at American Educational Research Association annual meeting,

Minneapolis, March 1970. Washington, D.C.: Bureau of Elementary and Secondary Education. 20 pages. ED 041 949 MF $0.65 HC $3.29.

Programmed Instruction

McGuigan, F. J. *How to Select and Evaluate Programmed Instructional Materials.* Raleigh: School of Education, North Carolina State University, 1971. 20 pages. ED 051 455 MF $0.65 HC $3.29.

Programs for the Disadvantaged

Fisher, Maurice D., and Ward, Virgil S. "A Design for Evaluating Educational Programs for Culturally Disadvantaged Children." Paper presented at American Educational Research Association annual meeting, Chicago, April 1972. 17 pages. ED 061 281 MF $0.65 HC $3.29.

Reading Programs

Fleming, Margaret. "An Approach to Evaluation of a Reading Program in the Public School Setting." Paper presented at American Educational Research Association conference, Minneapolis, March 1970. 12 pages. ED 040 012 MF $0.65 HC $3.29.

Social Studies Programs

Cox, C. Benjamin. "A Design for Evaluation: A Case Example." *Indiana Social Studies Quarterly,* 24, 2 (Autumn 1971), pp. 5-12. EJ 049 601.

Testing Programs

Unks, Nancy J., and Cox, Richard C. "A Model for the Evaluation of a Testing Program. Working Paper Number Four of the Program of Studies in Educational Research." Paper presented at American Educational Research Association annual meeting, Chicago, February 1968. Philadelphia: Research for Better Schools, Inc. 7 pages. ED 036 190 MF $0.65 HC $3.29.

Vocational Programs

Reynolds, Harris W., and others. *Evaluative Criteria for Vocational Technical Programs.* Harrisburg: Bureau of Curriculum Planning and School Evaluation, Pennsylvania State Department of Public Instruction, 1967. 135 pages. ED 022 861 MF $0.65 HC $6.58.

RESEARCH HIGHLIGHTS

Effective school program evaluation is a dynamic, vital foundation for instructional improvement. *"Evaluation Guide..."* (1969)

Unless both norm- and criterion-referenced measures are used, realistic evaluations cannot be made. *Klein (1972)*

Evaluation is a continuous process. As each decision is made in the school about students, teachers, content, or services offered, some evaluation is made concerning past performance and future need. *"Evaluation Guide..."* (1969)

Communication and interaction with key decision-makers is a cornerstone on which effective evaluation rests. *Randall (1969)*

Clearinghouse Accession Number: EA 005 144